

THUR, 10 JUN 1897

(Number of Visits

Tons { Gross 1994.50
 Net 1264

When built 1894

when made 1894

when made 1894.

Port belonging to Glasgow.

Is Electric Light fitted *no*

No. of Cylinders *Three* No. of Cranks *Three*

Diameter of Tunnel shaft ^{as per rule} $9''$ _{as fitted} $9\frac{1}{8}''$ Diameter of Crank shaft journals $9\frac{3}{4}''$ Diameter of Crank pin $9\frac{1}{4}''$ Size of Crank webs $12\frac{1}{4}'' \times 6\frac{1}{4}''$

No. of Feed pumps 2 Diameter of ditto $2\frac{1}{2}$ " Stroke 18" Can one be overhauled while the other is at work Yes.

No. of Donkey Engines *1* Sizes of Pumps *Feed 5 1/2 x 3 1/2 x 5 1/2 Ballast 12 x 10 x 10 1/2* No. and size of Suctions connected to both Bilge and Donkey pumps

After Hold: One - $2\frac{3}{4}$ " dia^r. Tunnel well, one - $2\frac{1}{2}$ " dia^r.

Are all the bilge suction pipes fitted with roses *Yes* Are the roses in Engine room always accessible *Yes* Are the sluices on Engine room bulkheads always accessible *Yes*

Are the discharge pipes above or below the deep water line *Above*

How are they protected

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times Yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock New vessel Is the screw shaft tunnel watertight Yes

BOILERS, &c.— (Letter for record \$) Total Heating Surface of Boilers 2544^{sq} Is forced draft fitted no.

No. and Description of Boilers *One Cylindrical Multi-Tuple* Working Pressure *160^{lbs}* Tested by hydraulic pressure to *320^{lbs}*.

Area of each valve 8.29 in^2 Pressure to which they are adjusted 165 lb . Are they fitted

with easing gear *Yes*. Smallest distance between rollers of aprones and banners of *wooden* *can* *is*

1 1/2" Thickness *1 1/2"* Direction of riveting: circum seams *Let Riv rivets' long*, seams *DB Shaps Ed*

Diameter of rivet holes in long. seams 1 7/8 Pitch of rivets 9" 4 1/2" ~~1 1/2" 1 1/2" 1 1/2" 1 1/2"~~ width of butt straps 1 1/2" 1 1/2" 1 1/2" 1 1/2" 1 1/2"

Size of compensating ring $26\frac{1}{2} \times 24 \times 1\frac{3}{4}$ "No. and Description of Furnaces in each boiler 3: Corrugated Material Steel Outside diameter 30.

Working pressure of furnace by the rules $16 \frac{3}{4}$ Combustion chamber plates: Material Steel Thickness: Sides $\frac{5}{8}$ " Back $\frac{1}{32}$ " Top $\frac{1}{32}$ " Bottom $\frac{1}{8}$ "

Material of stays *Steel* Diameter at smallest part $1\frac{3}{8}$ " Area supported by each stay $42\frac{5}{8}$ " Working pressure by rules $16\frac{1}{2}$ lbs. End plates in steam space:

Diameter at smallest part 23. Area supported by each stay 294 ^{sq} in. Working pressure by rules 161 ^{lb} Material of Front plates at bottom Steel

Thickness 8. Material of lower deck plate *steel* Thickness *with coating 8.5* Thickness *13* Front *13* Back *76* Mean pitch of staves *11.45*

Pitch across wide water spaces 14 1/2 Working pressures by rules 140 lb 2.5% Girders to Chamber tops. 140 lb

Working pressure by rules 200 lb Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked Yes

holes	Pitch of rivets	Working pressure of shell by rules	Diameter of flue	Material of flue plates	Thickness

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

GLS178-0034

15265 Gls

DONKEY BOILER— Description *Vertical with cross Tubes.*

Made at *Stockton* By whom made *Relig Bros.* When made *14/3/97* Where fixed *In Stockton*

Working pressure *80 lbs* Tested by hydraulic pressure to *160 lbs* No. of Certificate *1456* Fire grate area *28 sq* Description of safety valves *Direct Spring*

No. of safety valves *2* Area of each *406 sq* Pressure to which they are adjusted *85 lbs* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No.*

Diameter of donkey boiler *4' 6"* Length *14' 0"* Material of shell plates *Steel* Thickness *1 1/2"*

Description of riveting long. seams *Lap Double* Diameter of rivet holes *1 1/4"* Whether punched or drilled *Punched* Pitch of rivets *3 1/2"*

Lap of plating *1 1/4"* Per centage of strength of joint *77* Rivets *44* Thickness of shell crown plates *5/8"* Radius of do. *5 ft.* No. of Stays to do. *7*

Dia. of stays. *1 1/2"* Diameter of furnace Top *5' 10"* Bottom *6' 6"* Length of furnace *5' 10"* Thickness of furnace plates *7/8"* Description of joint *Lap Single*

Thickness of furnace crown plates *5/8"* Stayed by *Same as shell crown* Working pressure of shell by rules *82 lbs.*

Working pressure of furnace by rules *80 lbs.* Diameter of uptake *18"* Thickness of uptake plates *1/2"* Thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *Propeller, 3 crank, 2 main bearing Bolts, 2 crank pin Bolts, 3 cross head Bolts, 1 set Coupling Bolts, 1 set Feed & Relief pump valves, 1 set Springs for each piston, 6 Condenser tubes, 6 Boiler tubes, and Bolts, nuts & Iron granular sizes.*

The foregoing is a correct description,

Mumuir & Jackson Manufacturers of marine Engines & Boilers.

Dates of Survey while building
During progress of work in shops— *1896 Nov. 18, Dec. 3, 8, 11, 14, 16, 18, 22, 28, 1897 Jan. 11, 14, 15, 21, 26, Feb. 22, March 3, 5, 9, 9, 16,*
During erection on board vessel— *24, 25, 31, April 6, 13, 14, 20, 24 May 11, 12, 18, 19, 25, 26, June 1, 2, 3, 4, 5*
Total No. of visits *39*

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Engines and Boilers of this vessel have been built under special survey and the materials and workmanship are good. When completed they were tried under steam and worked satisfactorily.

*The Machinery is now in good and efficient condition and eligible in my opinion to have the record of **L.M.C. 6, 97.** marked in the Society's Register Book.*

*It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 6, 97.*

*H.S.
10.6.97.*

The amount of Entry Fee. £ *2* : " : "
Special " " " " £ *25* : *4* : "
Donkey Boiler Fee " " " " £ " : " : "
Travelling Expenses (if any) £ " : " : "

When applied for.

8/6/97

When received.

9/6/97

MACHINERY CERTIFICATE
WRITTEN.

Wm. Austin.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

FRI, 11 JUN 1897

+ L.M.C. 6, 97



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Foundation